LISTSERV® Lite 16.0 Installation Manual for Windows

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This document sets forth an installation procedure for **LISTSERV 16.0 Lite for Windows 2003/2008/XP/Vista/7** with a build date of **December 9, 2009**.

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Preface – About this Manual

This manual is for LISTSERV Classic running under Windows 2003/2008/XP/Vista/7. LISTSERV Lite users should see the installation guide written specifically for LISTSERV Lite.

This manual makes the following assumptions:

1. You have a Windows 2003/2008 Server, Windows XP, Windows Vista, or Windows 7 operating system installed and operating normally on a computer in your network that meets the various technical requirements listed later in this guide;

2. You have physical access to the machine in question and are logged in as Administrator, or at least as a member of the Administrators group with full control of the machine;

3. You can troubleshoot Windows 2003/2008/XP/Vista/7 (i.e. native OS problems, not problems related to LISTSERV) without assistance from this guide or from L-Soft.

Number three is particularly important. L-Soft will be happy to assist you with LISTSERV-related problems arising under Windows 2003/2008/XP/Vista/7 (assuming of course that you have purchased support for our product) but is unable to assist you in setting up your operating system, the Internet Information Service (or any other web server software available for the Windows 2003/2008/XP/Vista/7 operating systems), or any aspect of your operating system that is not directly related to LISTSERV's operation. If you are not familiar with Windows 2003/2008/XP/Vista/7, please be aware that L-Soft cannot help you with either their installation or subsequent troubleshooting.

This manual also follows this convention:

> "Windows" or "the Windows operating system" means Microsoft Windows 2003/2008/XP/Vista/7 indiscriminately. In other words, if we say "Windows", we mean "all of the Microsoft Windows operating systems under which LISTSERV is supported".
>
> "Windows Server" means specifically the Microsoft Windows 2003/2008 Server operating systems.
>
> "Windows Workstation" means specifically the Microsoft Windows workstation operating systems, that is, Windows XP.
>
> If we indicate a specific Microsoft Windows operating system by name, for example, "Windows XP", we mean specifically that version of the operating system and no other.

Section 1 Things to Consider Before Installation

You will need to gather some information before you start installation:

- What is the DNS hostname for the machine on which LISTSERV is going to be installed? This is something like `LISTSERV.YOURDOMAIN.COM`. It must be a fully-qualified domain name (FQDN) and it must map to an A or MX record as noted above in the networking requirements. While it is possible to use a bracketed IP (eg, `[10.0.0.24]`) for testing purposes, as noted above the use of bracketed IPs in production is not supported and not recommended.
- What SMTP server do you intend to use for LISTSERV's outgoing mail? Like the hostname for the LISTSERV machine, this must be an FQDN hostname listed in DNS. If you will be installing L-Soft's legacy LSMTP MTA on the same machine as LISTSERV then the answer to this question is identical to the answer for #1. Otherwise this must be the name of an external machine, ie, one running sendmail or some other SMTP implementation that can accept LISTSERV's outgoing mail for delivery. (If you will be installing LSMTP you will probably still want to identify an external SMTP machine to use temporarily to test LISTSERV prior to installing LSMTP, which is the recommended procedure.)
- What are the email addresses for the LISTSERV maintainers (the person or persons who are authorized to create lists and operate/maintain the server)?
- What drive and directory are you going to install LISTSERV into? (The installation script defaults to C:\LISTSERV; if you have more space on another drive, eg, a RAID array or other large disk, you will want to install LISTSERV on that drive rather than on C:.)
- What program group or folder do you want LISTSERV's icons to be placed in?

1.1 Technical Requirements

There are three classes of technical requirements for running LISTSERV under Windows -- hardware, software, and networking. Please read each section carefully.

1.1.1 Hardware Requirements

1. **CPU Architecture:** LISTSERV will currently run under Windows on Intel architectures only.

2. **Multiple Processors:** While LISTSERV itself will not use multiple processors (LISTSERV is a single-threaded application), overall machine performance may be enhanced by use of multiple processors if other applications running simultaneously on the machine can take advantage of them.

3. **Memory:** L-Soft recommends that a Windows LISTSERV machine start out with a minimum of 512M, as this will minimize paging and can lead to a marked improvement in performance, particularly if the web archive/administration interface (see below) is implemented. In particular, LISTSERV servers running with the High Performance Option (HPO) require more memory than non-HPO servers and should therefore start out with at least 1GB.

4. **Disk Space Needed:** LISTSERV itself takes up very little space (perhaps 4MB total for all of its default system files). When planning a LISTSERV system you need to take into account

how large your lists will be (100 bytes per subscriber entry in a given list) and how much space you will need for discussion list archives, which have the potential to grow quite large depending on your traffic and number of lists. For most small systems, a 4GB or larger drive is probably sufficient for some time. Larger systems will naturally require larger disks.

5. **Disk Architecture:** LISTSERV will run perfectly well for most sites on inexpensive EIDE disks of the modern sort (ATA-33 or ATA-66). If performance is an issue, it will be greatly enhanced by the use of fast SCSI disks in a RAID array with write-back caching and a write-back battery back-up. *Write-through caching is not recommended.* Usually it is best to divide a RAID array into at least two partitions: A boot partition of 3GB (effective 1.5GB) RAID 0+1, and a data partition making up the rest of the available disk space at RAID 5. If it is not feasible to divide the array in this manner, RAID 0+1 for the entire array is suggested. (The boot partition can be larger if desired -- particularly as very large disks are much more economical than in the past -- but we would still recommend that it be configured RAID 0+1).

   We have also noted increased performance with SATA and SATA2 architectures -- in some cases even better performance than SCSI. One main advantage of SATA is the availability of very large disks at relatively low cost. And of course most boards that support SATA also support at least RAID 0+1 for redundancy. If you are building a new machine for LISTSERV, you may want to consider using a board that supports SATA.

   To date we have not done any testing with solid-state drives.

6. **Disk Format and Security:** L-Soft *strongly recommends* that LISTSERV be installed on an NTFS-formatted partition. LISTSERV will run out of a FAT partition, but FAT does not provide the same level of security and performance available with NTFS.

General performance notes:

- L-Soft *STRONGLY DISCOURAGES* running LISTSERV out of a RAM disk in order to speed up I/O. This is not a supported configuration and if you have problems with it the support group's response will be to tell you to stop using the RAM disk.

- If system RAM is tight, either a fast disk or more RAM is a necessity if you are to minimize I/O time lost to paging. An otherwise fast system can become quite sluggish if it is required constantly to read and write to virtual memory. Adding more RAM is usually preferred as it is more efficient to access RAM than it is to access even a fast disk.

1.1.2 Software Requirements

1. LISTSERV requires one of the following:
   - Windows XP Professional. Service Pack 3 is supported.
   - Windows 2003 Server. Service Pack 3 is supported.
   - Windows 2008 Server. Service Pack 2 is supported.
   - Windows Vista is supported.
   - Windows 7 is supported.

     LISTSERV support for Windows NT 3.5x and 4.0 and for Windows 2000 has been withdrawn for LISTSERV 16.0 and later.

2. Either Internet Information Service (IIS) or some other WWW server (ie, Apache) should be installed on the machine if you intend to use the web archive and administration interface. *LISTSERV's web interface cannot be installed on a separate machine.* If you install IIS on the LISTSERV machine you must disable or not install the IIS SMTP service -- or configure it to listen on a non-standard TCP port -- as otherwise it will conflict with LISTSERV. Note, however, that there is a documented and supported solution for using the IIS SMTP service for LISTSERV's outbound mail (see below).
3. INBOUND MAIL: The SMTP "listener" service (SMTPL.EXE) provided in the LISTSERV installation kit must be installed. Third-party SMTP MTAs (Mail Transfer Agents) are supported for inbound LISTSERV mail if they can be configured to redirect LISTSERV's mail to SMTPL running on a non-standard port (for instance, 40025). Examples of 3rd party MTAs that can be used for this purpose are MailEnable Standard Edition or the IIS SMTP service. (A white paper describing how to configure MailEnable Standard Edition for use with LISTSERV and the SMTPL.EXE "listener" service is available upon request.)

   Note: Sites with valid licenses for L-Soft's legacy LSMTP mailer may of course continue to use LSMTP for both inbound and outbound mail.
4. OUTBOUND MAIL: The SMTPL.EXE "listener" service *cannot* be used for outbound mail. You will need to have access to an SMTP MTA that can handle LISTSERV's outbound mail. This machine can be a unix machine running one of the standard unix MTAs (sendmail/qmail/postfix), a Windows machine running Microsoft Exchange or MailEnable Standard Edition, or any fully-standards-compliant SMTP server running on any platform, as long as it can handle the amount of traffic you will generate with LISTSERV.

   Low-end SMTP servers such as IIS SMTP and MailEnable Standard Edition can handle modest delivery loads (perhaps 10K-25K messages per hour, although we have seen a well-tuned IIS SMTP instance handle up to 75K per hour). For heavier delivery loads, L-Soft recommends a high-performance SMTP server that can handle loads of more than 1 million messages per hour.

   If the outbound MTA is running on an external machine, that machine must be configured to accept for delivery so-called "relay mail" from the machine running LISTSERV (it may of course otherwise be configured to reject "relay mail" coming from other hosts).

   If you need a "turnkey" single-machine solution for LISTSERV, a white paper describing how to use L-Soft's SMTPL.EXE "listener" for inbound mail and the Microsoft IIS SMTP service for outbound delivery can be found here: Using the Microsoft IIS SMTP Service for LISTSERV Deliveries

   Also, a white paper describing how to configure MailEnable Standard Edition for use with LISTSERV and the SMTPL.EXE "listener" service is available upon request.

1.1.3 Networking requirements

1. TCP/IP connectivity, preferably 24/7, with enough bandwidth to handle your workload. Please note carefully that LISTSERV is not designed to dial up and access POP mailboxes. The proper installation and operation of LISTSERV is contingent on direct connection to the Internet in order for it to receive and send SMTP mail. If you do not understand this, L-Soft *strongly recommends* that you get expert technical advice before proceeding further, or consider using a hosting service instead of running LISTSERV yourself

(see http://www.lsoft.com/products/ease.asp for an overview of hosting services offered by L-Soft).

2. In conjunction with networking requirement #1, and as a fundamental requirement of the SMTP mail protocol, LISTSERV requires a static IP address which is mapped via a DNS A or MX record to a particular host name (typically LISTSERV.yourdomain, for example, LISTSERV.EXAMPLE.COM). If you are planning to use the web archive/administration interface with LISTSERV, an A record is required at minimum (web browsers cannot connect to hosts that have only an MX record). Please note carefully that L-Soft does not support LISTSERV servers running without DNS entries (ie we do not support servers configured with bracketed IP addresses instead of FQDNs [fully-qualified domain names, for example, LISTSERV.EXAMPLE.COM]).

   The use of a CNAME is STRONGLY DISCOURAGED because typically such hostnames are rewritten ("canonicalized") when mail sent from them traverses the Internet.

   Microsoft's WINS and MAPI protocols are not supported or used by LISTSERV.

   There are no guarantees that LISTSERV will work with a dynamically-assigned IP address (for instance, one obtained through DHCP), and a DNS entry is required if you expect people to be able to send mail to, and also--in many cases where the user's ISP does a reverse DNS lookup to validate that the mail is not spam--to *receive* mail from the server.

   Again, if you do not understand any part of this requirement, L-Soft *strongly recommends* that you get expert technical advice before proceeding further.

3. If installing LISTSERV behind a firewall with the expectation that users from the outside world will be able to access it, it is imperative that you provide access to the following TCP ports on the LISTSERV machine: Port 25 (SMTP) and port 80 (webserver, if the web archive/administration feature is enabled). It may also be necessary to provide access to port 53 (nameserver) if LISTSERV is unable to resolve the name of its outgoing mail host.

   If you are installing the legacy LSMTP MTA along with LISTSERV, you will also need to ensure that port 110 (POP3) is open if you intend to use the POP server component of LSMTP. If your DNS is not inside the firewall, port 53 (nameserver) will also have to be opened so that LSMTP can access external DNS servers. (It should be noted here that LSMTP *requires* access to a DNS server or it will not start up.)

   Installing LISTSERV behind a firewall is almost more of an art than a science (and every firewall seems to be different) but the bottom line is that the above ports must be open if you expect LISTSERV to work. It is not recommended to route incoming LISTSERV mail through another machine (ie the firewall) as this normally leads to complications.

1.1.4 Windows NT 4.0 and Windows 2000 No Longer Supported

Starting with LISTSERV 16.0, L-Soft no longer supports both Windows NT 4.0 and Windows 2000. Sites currently running earlier versions of LISTSERV under NT 4.0 (Intel) can upgrade to Windows 2003 without needing a new LAK. Sites running LISTSERV under the Alpha-AXP version of Windows NT 4.0 should contact their sales representative for information on migrating away from Windows NT 4.0 (Alpha-AXP).

Section 2 Installing LISTSERV

L-Soft provides its software via FTP download only. The installation kits for LISTSERV Lite for Windows are found at

http://www.lsoft.com/download/listservlite.asp

These kits are complete implementations of LISTSERV Lite Free Edition for Windows. If you have already purchased a paid copy of LISTSERV Lite you will have received a production LAK separately--we will describe the installation of that key later in this document.

2.1 Starting the installation

First, place the distribution kit into a temporary directory (e.g., C:\TEMP or C:\SCRATCH). DO NOT try to run the kit from the directory into which you are going to actually install LISTSERV.

Next, make sure that you are logged in either as the Administrator user or as a member of the Administrators group. You cannot install LISTSERV unless you have administrative control of the computer.

The kit is a self-contained, self-extracting setup kit that includes all of the files you will need for the installation. Simply run LISTSERV-LITE.EXE from a DOS prompt or double-click on it in Windows Explorer to start the installation and follow the script.

2.2 Basic configuration

The installation script will ask whether or not you want to go ahead and configure the LISTSERV server. You MUST do a basic server configuration at install time or the installer will exit, but bear in mind that a more complex configuration can be done after finishing the installation, if necessary. For the basic configuration done at install time, you will need to have the information discussed below for NODE, SMTP_FORWARD, and POSTMASTER. (Note: This basic configuration step is skipped for upgrades, which are assumed to be already configured.)

Configuring the server after installation is done via the web administration interface. Log in as a LISTSERV administrator, and choose Server Administration/Site Configuration/Site Configuration to enter the web-based configurator.

It should be noted that the MAIN\SITE.CFG file is now used only for initial startup; changes made via the web configurator are written to a platform-independent file which is maintained by LISTSERV and which should not be hand-edited.

In addition, the old SITE.EXE configuration GUI is no longer supported or provided (because it operates on the MAIN\SITE.CFG file). If you have a copy from a previous installation, it should not be used, and L-Soft recommends that it simply be deleted along with SITE.HLP and SITEDATA.FILE.

2.2.1 NODE

The NODE setting is the fully-qualified domain name as registered in DNS for the machine LISTSERV is running on. As noted above, it is possible to insert a square-bracketed dotted-

decimal IP address in this box for testing purposes, but L-Soft neither recommends nor supports this in production. This is the host name that LISTSERV will always identify itself with when it sends mail out.

2.2.2 MYDOMAIN

MYDOMAIN does not refer to your corporate domain. MYDOMAIN is the space-separated list of all possible host names your machine might be known as. In many cases the value of MYDOMAIN is the same as NODE, but for instance some machines running LISTSERV also run the enterprise's World Wide Web server, and may thus be identified in DNS as something like "WWW.MYCOMPANY.COM". If you're running L-Soft's legacy LSMTP MTA, you might also be using the POP3 feature in LSMTP to handle your corporate mail accounts, and might have a DNS record for "POP.MYCOMPANY.COM" pointing to the LISTSERV machine. And of course we'll assume that NODE has been set above to something like LISTSERV.MYCOMPANY.COM. Using this as an example you would set the MYDOMAIN setting to contain, in space-separated format, all of these names that mail might come in to LISTSERV under, with the NODE value coming first:

```
LISTSERV.MYCOMPANY.COM WWW.MYCOMPANY.COM POP.MYCOMPANY.COM
```

Alternately the same thing can be done by specifying

```
%NODE% WWW.MYCOMPANY.COM POP.MYCOMPANY.COM
```

This way if someone accidentally writes to LISTSERV@POP.MYCOMPANY.COM, LISTSERV will recognize POP.MYCOMPANY.COM as equivalent to LISTSERV.MYCOMPANY.COM and will process the mail as if it had been addressed to LISTSERV@LISTSERV.MYCOMPANY.COM. Otherwise the mail will bounce as LISTSERV has no other way to know what other names the machine might be known by in DNS.

2.2.3 SMTP_FORWARD

This setting refers to the name of the machine which will be handling LISTSERV's outgoing mail. It must be a fully-qualified domain name of a machine registered in DNS. For instance if your corporate mail gateway is MAIL.MYCOMPANY.COM, you could set SMTP_FORWARD to that value.

If you install L-Soft's legacy LSMTP MTA after you test LISTSERV, this value can be changed to the same value you coded for NODE. Since we recommend testing the success of your LISTSERV installation before installing LSMTP, you probably don't want to do that at this point.

2.2.4 POSTMASTER

This is a space-separated list of userid@host.domain type email addresses belonging to people who have authority to manage LISTSERV--specifically the people who are allowed to create lists, but also who have pretty much global authority on the server to look at lists, modify list headers, and so forth. There are some advanced options for this setting but for right now you will probably just want to insert your own email address so that you can test the server.

> **Note:** The POSTMASTER should NEVER be LISTSERV@ anywhere or POSTMASTER@ anywhere. These userids are reserved and mean specific things to

LISTSERV. If you need to use a generic name for a postmaster account, it is recommended that you use something like "listmaster" or "lstmaint" instead.

2.2.5 CREATEPW

The password that will be used to create lists and perform certain management functions (such as administering LISTSERV's user password feature). Note that when using the web management features, you do not use the CREATEPW= value, but rather your own personal LISTSERV password, to validate your identity. See the main LISTSERV documentation for information on how to create a personal LISTSERV password.

> **Note:** Starting with LISTSERV 14.3, CREATEPW and its companion STOREPW are obsolete, as postmasters can now authenticate all commands with their personal LISTSERV password. If you do not want to set CREATEPW at all, you should set it to the special value `*NOPW*`, which will disable the authentication system they are associated with.

2.2.6 MYORG (optional)

A string that identifies your organization in the From: line of administrative mail sent out by LISTSERV. This defaults to the NODE value you coded above, but you can change it to be more descriptive, eg, "University of XYZ" or "My Company, Inc." If you were to set it to "My Company, Inc.", the From: line of administrative mail would look like this:

```
From:          "My Company, Inc. LISTSERV Server (16.0)"

               <LISTSERV@LISTSERV.MYCOMPANY.COM>
```

Only the part preceding "LISTSERV Server" may be modified by the MYORG setting. The rest of this string is hard-coded and cannot be changed.

2.3 Advanced configuration

There are a number of advanced configuration parameters that can be set to modify LISTSERV's behaviour and/or tune it for better performance. The most common parameters are documented in the Site Configuration Keyword Reference document for LISTSERV 16.0. Please be sure to consult the chapter in that manual that discusses keywords and other settings that are disabled or work differently under LISTSERV Lite than they do under LISTSERV Classic.

2.4 Installing the License Activation Key (LAK)

If you are installing the Free Edition, the LAK will be installed for you automatically and you do not need to do anything further in this section. If you have purchased a commercial license for LISTSERV Lite, the procedure to install it is as follows:

1. Create a disk file with the license information supplied. If you received the license registration form electronically, simply delete the mail headers and other extraneous information (you do not need to remove the instructions found at the top of the LAK). If you received it via FAX or postal mail, you will have to retype the information. Please observe spacing carefully. To make the LAK easier to transcribe, we always insert multiple blanks where one is needed.

Thus, unless you see a big white space on the FAX, you should not insert any blank. (Note that LAK information can also be entered via the SITE.EXE utility.)

2. Make a backup copy of the file you have just created.

3. Install a copy of the file under the name LICENSE.MERGE in the product's main directory. This would be MAIN\LICENSE.MERGE relative to your LISTSERV root directory (eg C:\LISTSERV\MAIN\LICENSE.MERGE) if you installed LISTSERV under C:\LISTSERV).

4. Start LISTSERV (or stop and restart it if it was already running). It will compile the new LAK, verify its integrity, and merge it into its license database. If no error was detected, it will then delete the LICENSE.MERGE file. This is why you must make a backup copy of the license file before activating it. The LAK will of course remain in the license database, but you may need the original in case of hardware failure.

   Important: The LICENSE.MERGE file MUST be a flat ASCII text file (Unicode is not supported).

   If you create the LICENSE.MERGE file with NOTEPAD, please note that by default the NOTEPAD application will save your file with a `.txt` extension (e.g., if you type `license.merge` in the "Save as" dialog box, NOTEPAD will actually save `license.merge.txt`). If this happens you must rename the file to `license.merge` or LISTSERV will not see it on startup. You can avoid this problem by enclosing the name of the file in double quotes, i.e., when you are prompted for the filename in the "Save as" dialog box, enter `"license.merge"` (you *must* use the double quote marks!) and press the OK/Save button. If you use the double quotes, your file *will* be saved as `license.merge` and not as `license.merge.txt` .

   Since the LISTSERV-LITE mailing list is a user-supported support forum, your LAK information should never be sent there. If you have trouble with the installation of your LAK, the LISTSERV support staff will be happy to assist you at SUPPORT@LSOFT.COM . All other support inquiries should go to the LISTSERV-LITE mailing list.

Section 3 Starting LISTSERV to Verify a Successful Installation

To start LISTSERV for debugging/testing purposes, you can simply double-click the "LISTSERV for Windows (interactive)" icon created by the installation script. This starts LISTSERV in a DOS box so that you can see what it is doing. Similarly, you should start the SMTPL.EXE "listener" service by double-clicking on the "LISTSERV SMTP Listener (interactive)" icon (unless you are using L-Soft's legacy LSMTP MTA).

You can run only one copy of LISTSERV at any given time. That is, you cannot start LISTSERV interactively if it is already running as a service, or vice-versa, nor can you start LISTSERV in multiple CMD windows. The same applies to the SMTP listener.

When LISTSERV is installed, it is registered in the Services Manager to start automatically as a system service at boot time. Thus if you have rebooted your machine after installing LISTSERV, it may already be running. If it is already running when you attempt to start it in a DOS box, you will get the following error:

```
C:\LISTSERV\MAIN>lsv start
>>> Unable to create SMTP synchronization events <<<

abnormal program termination
```

Similarly, if the SMTPL "listener" is already running as a service, you will get something like:

```
C:\LISTSERV\MAIN>smtpl start
>>> Error 5 creating synchronization event.
Statistics for this session:

       Physical memory: 2048M (1417M available)
       Paging file:     3939M (3409M free)
       Process memory:  6968k in use
       Connections:     0 (max 0, total 0 in this session)
       Messages:        0 (0 recipients)
       SMTPL uptime:    0 00:00:00 (50.3% CPU utilization)
```

If the services are running, simply stop them from the Control Panel/Services applet, or just issue the commands

```
NET STOP LISTSERV
NET STOP LISTSERV-SMTP
```

in your DOS box before proceeding.

If there are no problems, LISTSERV will start up with messages similar to the following:

```
C:\LISTSERV\MAIN>lsv start
12 Mar 2009 10:20:48 LISTSERV(R) for Windows version 16.0 starting...
12 Mar 2009 10:20:48  Copyright Eric Thomas 1986-2009
12 Mar 2009 10:20:48 Build date: 26 Feb 2009
```

```
12 Mar 2009 10:20:48
12 Mar 2009 10:20:48 SIGNUP files are being compressed...
12 Mar 2009 10:20:48 -> No entry removed.
12 Mar 2009 10:20:48 The network tables are outdated and must be rebuilt.
* Network tables generation process started - be patient...
* Step 1 complete - DBINDEX file generated.
*                   198 NJE nodes, 64 dummy nodes, total 262.
* Step 2 complete - NODESUM3 file generated (7840 bytes).
*                   10 countries, 3 networks, 59 ':internet.' tags,
*                   73 hostnames, total 2411 bytes of Internet<->NJE data.
* Step 3 complete - LINKDEF2 file generated (236 links).
* Step 4 complete - no list/AFD/FUI entry updated for changed node names.
* Step 5 complete - SIGNUP files have been compressed, no entry removed.
12 Mar 2009 10:20:48 The peers tables are being rebuilt...
12 Mar 2009 10:20:49 ->>> No entry for LISTSERV.EXAMPLE.COM in PEERS NAMES.
12 Mar 2009 10:20:49 ->>> Dummy entry generated pending official registration:
12 Mar 2009 10:20:49 ->>> LISTSERV@LISTSERV.EXAMPLE.COM - Backbone=NO, License n
umber=9999.
12 Mar 2009 10:20:49 -> There are 300 known servers.
12 Mar 2009 10:20:49 File PEERS.DBNAMES has been rebuilt.
12 Mar 2009 10:20:49 File PEERS.DBINDEX has been rebuilt.
12 Mar 2009 10:20:49 File PEERS.NAMESUM has been rebuilt.
12 Mar 2009 10:20:49 File PEERS.DISTSUM2 has been rebuilt.
* Peers tables rebuilt successfully.
12 Mar 2009 10:20:49 Nearest backbone host is LISTSERV@PLUM.EASE.LSOFT.COM
12 Mar 2009 10:20:49 Nearest NJE host is LISTSERV@CUNYVM
* Step 6 complete - link weights file successfully compiled.
*
* Network tables generation completed successfully.
12 Mar 2009 10:20:49 Nearest backbone host is LISTSERV@PLUM.EASE.LSOFT.COM
12 Mar 2009 10:20:49 Nearest NJE host is LISTSERV@CUNYVM
12 Mar 2009 10:20:49 License merged successfully:
> LISTSERV-WINNT-*
>          UNITS=4
>          EXP=30-JUN-2009
>          REL=16.0
>          OPT=EVAL
>          SERIAL=EVAL-NT
>          CKS=1-4013CB73-A9C0E67D
********************************************************************************
****************************** Evaluation copy ********************************
********************************************************************************
*                                                                              *
* This  software is  an evaluation  copy,  provided to  you at  no charge  to *
* demonstrate the capabilities  of our product(s). You are  granted a license *
* to use this  evaluation copy until 30  Jun 2009, at which  time the program *
* will automatically  exit with an  error message  every time you  attempt to *
* start it. The reason for this restriction is that we want to make sure that *
* you evaluate the  latest version of the software, and  not an obsolete copy *
* obtained from an outdated distribution.                                      *
*                                                                              *
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* not derive a profit from such use.                                           *
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* be included on any copy you make.                                            *
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```

```
* NO RIGHT TO MODIFY: You are not  allowed to modify the software in any way, *
* except for the  interfaces provided with source code, which  you may modify *
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* property and subject to the present terms and conditions.                    *
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* USE AT YOUR OWN RISK: THE SOFTWARE  IS PROVIDED ON AN 'AS IS' BASIS. L-SOFT *
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* MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Neither L-Soft nor any *
* of  its employees,  officers  or  agents will  be  liable  for any  direct, *
* indirect or consequential  damages, even if L-Soft had been  advised of the *
* possibility of such damage.                                                  *
*                                                                              *
* FOR ASSISTANCE  CONTACT: SUPPORT@LSOFT.COM, or  call +1 (301)  731-0440 (or *
* 1-800-399-5449 from the US or Canada).                                       *
*                                                                              *
********************************************************************************
12 Mar 2009 10:20:49 Sent information mail to LSTMAINT@EXAMPLE.COM
12 Mar 2009 10:20:49 Initialization complete.
12 Mar 2009 10:20:49 You can enter commands via the keyboard at any time.
```

SMTPL isn't as verbose. It will start up with only a few messages:

```
C:\LISTSERV\MAIN>smtpl start
12 Mar 2009 12:23:36 LISTSERV SMTP listener, version 1.0w
12 Mar 2009 12:23:36 Copyright Eric Thomas 1994-2007
12 Mar 2009 12:23:36 Now listening to 0.0.0.0, port 10025.
12 Mar 2009 12:23:36 Initialization complete - 200 concurrent threads.
```

To test the server, send Internet mail to the LISTSERV address with some random command, such as HELP, to check that the SMTP listener and outgoing mail interface are working correctly. Please note that the "LISTSERV address" is the address formed by "LISTSERV@" + the value you defined in the site configuration file for `NODE=`. For instance, if you defined `NODE=LISTSERV.XYZ.COM`, the LISTSERV address would be `LISTSERV@LISTSERV.XYZ.COM`.

DO NOT attempt to create lists or use the WWW interface until the basic email functions (ie, sending commands to LISTSERV by email and getting a response) are tested and working correctly.

If you have any problem, contact SUPPORT@LSOFT.COM . Note that LISTSERV will not see any mail you send it via MAPI unless you have a MAPI/SMTP gateway for your LAN. LISTSERV does not include a MAPI gateway and thus does not support MAPI.

When running as services, LISTSERV and SMTPL both create log files in the \LISTSERV\LOG directory but, for performance reasons, the file buffers are not flushed with each and every write. If you attempt to TYPE the log file, it may appear to be empty. If you wait a few minutes, the buffers will be flushed and you will be able to examine the files. LISTSERV generates "crash reports" when it terminates abnormally, which are sent to the LISTSERV postmasters by default. These "crash reports" normally include a traceback of the error along with the last 100 LISTSERV log entries prior to the crash, and should be sent to L-Soft support for problem resolution.

In interactive mode, the log files are also created but the file buffers are flushed continuously. Flushing the logs continuously ensures that, in the event of a severe program failure, the logs will always contain information about the cause of the failure.

(Due to the fact that writing to command windows can significantly slow down an application, interactive mode should be used only when you are trying to troubleshoot a problem.)

> **Note:** While critical errors are reported to the Windows System Event Log and can be examined with Event Viewer (select the Application log), the Windows error codes are almost never useful for debugging problems with LISTSERV and the LISTSERV console log should be consulted in favor of the event log when a problem arises.

When running as services, both LISTSERV and SMTPL may be stopped from the Control Panel/Services applet, or by issuing the commands NET STOP LISTSERV and NET STOP LISTSERV-SMTP from a DOS prompt. Sites running LISTSERV on Intel architectures may also use the "Stop LISTSERV Service" and "Stop LISTSERV-SMTP Service" icons provided.

When running in interactive mode, to stop LISTSERV, simply type STOP. To stop SMTPL, wait until there is no more activity and type Ctrl-C.

3.1 Windows Firewall Considerations

It is recommended that sites using the Windows Firewall should open the firewall to the LISTSERV program. This is the preferred method as it makes it easy to change various TCP/IP-related aspects of LISTSERV's operation (eg, outbound mail port, TCPGUI port) without having to change the firewall.

For the SMTPL.EXE "listener" or the legacy LSMTP mailer, it is recommended to open the firewall on port 25 from all IP addresses. Alternately, simply open the firewall to the appropriate program. The only advantage to explicitly opening port 25 as opposed to opening the firewall to SMTPL.EXE or some other specific MTA program is that you can easily switch from SMTPL to another MTA or vice versa without having to worry about changing the firewall settings. Port 25 is also a "well-known" port so inbound mail is in almost every case going to come to port 25, regardless of which program is listening on that port for LISTSERV's mail.

Section 4 Installing the LISTSERV Web Interface

4.1 Setting Up the Interface During Installation

It is strongly recommended that you set up the basic web interface when you install the software. The installation kit will offer to do this for you; you need only provide the directory used for CGI programs and the directory and base URL used for LISTSERV's web files.

If you choose to set up the interface later, please see the next section.

4.2 Setting Up the Interface Manually

If you choose to install the web interface manually, please refer to either the *Configuring the LISTSERV Web Interface for IIS 6.x* white paper or the *Configuring the LISTSERV Web Interface for IIS 7.x* white paper. Both can be found on L-Soft's web site at http://www.lsoft.com/resources/whitepaper.asp .

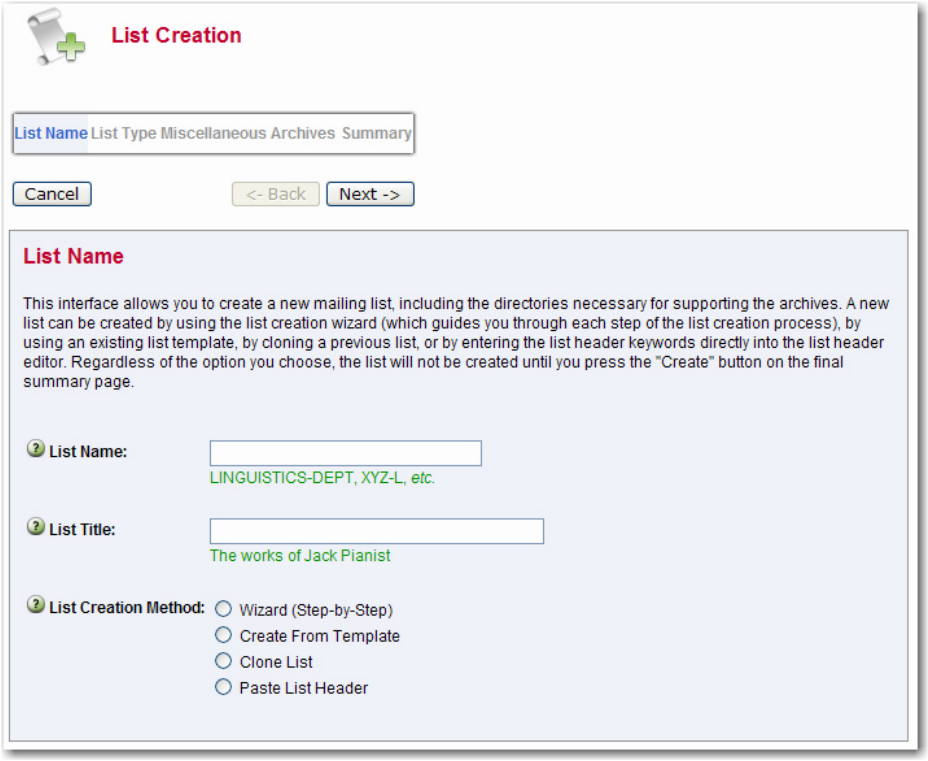
Complete information on installing the Web Archive Interface (including how to publish the content of "Send= Private" and/or "Confidential= Yes" lists) is contained in the Site Manager's Operations Manual for LISTSERV.

Section 5 Creating Your First List

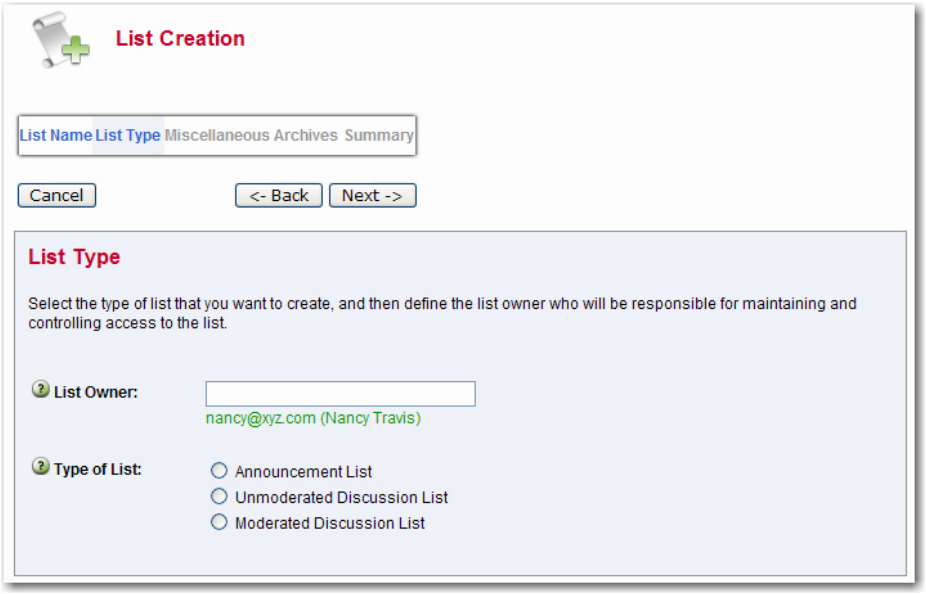
Site administrators can create a new mailing list, including the directories necessary for supporting the archives, in a matter of minutes using the List Creation Wizard. This wizard guides you through a set of questions about the type of list that you want to create.

To create a list using the List Creation Wizard, select **Server Administration** > **Mailing Lists** > **List Creation** from the Toolbar.

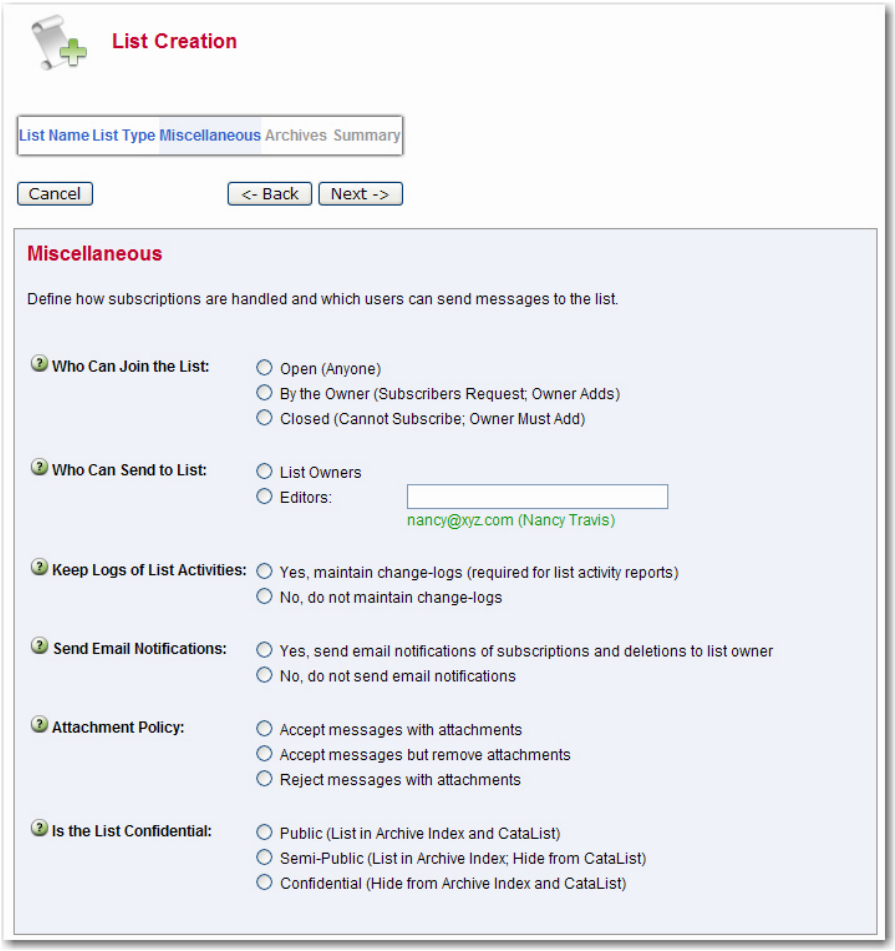
The List Creation Screen opens. Enter the **List Name**, the **List Title**, and then select the **Wizard (Step-by-Step)** option.


List Creation
List Name List Type Miscellaneous Archives Summary
Cancel
<- Back
Next ->
List Name
This interface allows you to create a new mailing list, including the directories necessary for supporting the archives. A new list can be created by using the list creation wizard (which guides you through each step of the list creation process), by using an existing list template, by cloning a previous list, or by entering the list header keywords directly into the list header editor. Regardless of the option you choose, the list will not be created until you press the "Create" button on the final summary page.
List Name:
LINGUISTICS-DEPT, XYZ-L, etc.
List Title:
The works of Jack Pianist
List Creation Method:
Wizard (Step-by-Step)
Create From Template
Clone List
Paste List Header

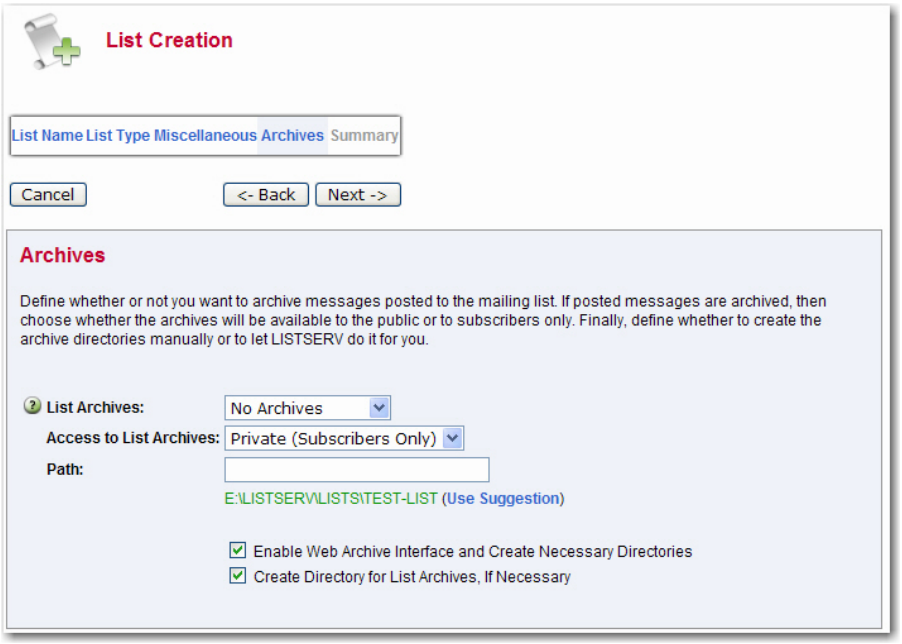
Click the **[Next ->]** button to continue. The List Type screen opens. Enter the **List Owner**, and then select the type of list you'd like to create. Your choices are **Announcement List**, **Unmoderated Discussion List**, and **Moderated Discussion List**.


List Creation
List Name List Type Miscellaneous Archives Summary
Cancel
<- Back Next ->
List Type
Select the type of list that you want to create, and then define the list owner who will be responsible for maintaining and controlling access to the list.
List Owner:
nancy@xyz.com (Nancy Travis)
Type of List:
Announcement List
Unmoderated Discussion List
Moderated Discussion List

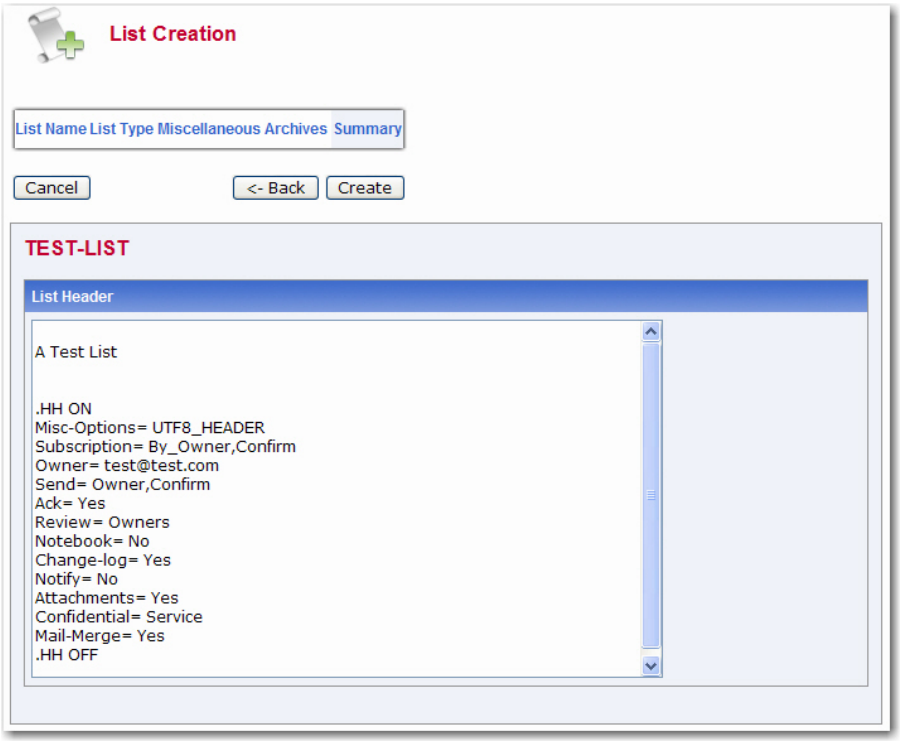
Click the **[Next ->]** button to continue. The Miscellaneous screen opens. Define how subscriptions are handled and which users can send messages to the list. This screen will vary slightly depending on the type of list you're creating.


List Creation
List Name List Type Miscellaneous Archives Summary
Cancel
<- Back Next ->
Miscellaneous
Define how subscriptions are handled and which users can send messages to the list.
Who Can Join the List:
Open (Anyone)
By the Owner (Subscribers Request; Owner Adds)
Closed (Cannot Subscribe; Owner Must Add)
Who Can Send to List:
List Owners
Editors:
nancy@xyz.com (Nancy Travis)
Keep Logs of List Activities:
Yes, maintain change-logs (required for list activity reports)
No, do not maintain change-logs
Send Email Notifications:
Yes, send email notifications of subscriptions and deletions to list owner
No, do not send email notifications
Attachment Policy:
Accept messages with attachments
Accept messages but remove attachments
Reject messages with attachments
Is the List Confidential:
Public (List in Archive Index and CataList)
Semi-Public (List in Archive Index; Hide from CataList)
Confidential (Hide from Archive Index and CataList)

Click **[Next ->]** to continue. The Archives screen opens. Click the **List Archives** drop-down menu to define whether or not you want to archive messages posted to the mailing list. If posted messages are archived, then click the **Access to List Archives** drop-down menu to choose whether the archives will be available to the public or to subscribers only. Finally, define whether to create the archive directories manually or to let LISTSERV do it.


List Creation
List Name List Type Miscellaneous Archives Summary
Cancel
<- Back
Next ->
Archives
Define whether or not you want to archive messages posted to the mailing list. If posted messages are archived, then choose whether the archives will be available to the public or to subscribers only. Finally, define whether to create the archive directories manually or to let LISTSERV do it for you.
List Archives:
No Archives
Access to List Archives:
Private (Subscribers Only)
Path:
E:\LISTSERV\LISTS\TEST-LIST (Use Suggestion)
Enable Web Archive Interface and Create Necessary Directories
Create Directory for List Archives, If Necessary

Click **[Next ->]** to continue. The Summary screen opens. Review your selection, and then click **[Create]**.



Section 6 Upgrading your LISTSERV installation

Because of non-backward-compatible changes made by LISTSERV 16.0 to the format of LISTSERV's SIGNUP files which allow UTF-8 characters to be used in passwords, and the addition of non-reversible subscriber password encryption, L-Soft **STRONGLY RECOMMENDS** that, prior to upgrading, a full backup be made of your LISTSERV installation.

IMPORTANT: LISTSERV 16.0 requires a version 16.0 LAK!

You must obtain and install a LISTSERV version 16.0 product LAK prior to upgrading your server, or LISTSERV will not start after the upgrade.

IMPORTANT: Install your LISTSERV 16.0 product LAK before upgrading! A valid product LAK (License Activation Key) with "REL=16.0" must be installed before upgrading or LISTSERV will not start after the upgrade.

If you have not received a LISTSERV 16.0 product LAK, please contact your sales representative or SALES@LSOFT.COM before upgrading!

If your product LAK has EXP=NEVER, you will also need to install an appropriate LISTSERV maintenance LAK.

To find out if you can upgrade to LISTSERV 16.0 with your current LAKs, please issue a SHOW LICENSE command to LISTSERV and examine the response. It will be similar to this:

```
License type:       Permanent
Expiration date:    None - perpetual license
Maintenance until:  26 May 2009, serial number MNT-XYZ-1
Capacity:           Unlimited
Version:            16.0
Serial number:      XYZ-1
Build date:         9 Dec 2009
```

Your license key will be valid for the 16.0 upgrade if your current product LAK is for version **16.0 or higher** and your maintenance is **not expired.**

Upgrading LISTSERV is almost as simple as installing it. Simply follow these steps:

- If you are upgrading from one full version of LISTSERV to another (for instance, from 15.0 to 16.0), you should have received a new LAK from your sales representative. If you do not have a LAK for the version you are upgrading to, stop right here and contact your L-Soft sales representative. If you are not sure what version you are currently licensed for, send a "SHOW LICENSE" command to LISTSERV.

- If you have received a new LAK, install it onto your old installation, following the instructions that come with the LAK. Send LISTSERV a "SHOW LICENSE" command after restarting LISTSERV to ensure that the new LAK has been installed properly. Do not proceed further until this step has been correctly completed.

- Back up the entire LISTSERV directory hierarchy (just in case).

- Stop LISTSERV and SMTPL (note that if you are running the legacy LSMTP MTA, you do not need to stop SMTPL as it should be disabled).

- Get the current Windows NT evaluation kit from the LISTSERV evaluation kit download page and install it over your existing installation. Your current configuration, lists, and other settings will be preserved. Note that evaluation kits are production code limited only by an evaluation LAK, which your production LAK will override.

- If you are running the legacy LSMTP MTA as your mailer, open the Windows Control Panel/Services applet and ensure that the "LISTSERV SMTP Listener" service is disabled. This is very important! Note that the current version of the installation GUI will not register SMTPL.EXE as a service if an installation of LSMTP is detected in the Windows registry, but it is still wise to check this.

- If you have the web archive interface installed, either re-run the web archive configuration feature of SITE.EXE or manually copy WA.EXE from the \LISTSERV\MAIN directory to your cgi-bin or scripts directory to update it. The setup program will not do it for you automatically.

- Restart LISTSERV and SMTPL (if not running legacy LSMTP) and send a command to make sure the installation was successful.

Section 7 Additional Resources

7.1 Documentation

7.1.1 Manuals

All of L-Soft's formal documentation for LISTSERV, including its manuals, installation guides, and online help systems, is available at http://www.lsoft.com/manuals .

7.1.2 White Papers

L-Soft frequently publishes white papers on specific topics for our products. These white papers are available at http://www.lsoft.com/resources/whitepaper.asp .

7.1.3 Tech Tips

Every quarter, L-Soft's newsletter, LISTSERV at Work, is released and contains Tech Tips that are written by L-Soft specialists with the goal of giving our customers some advice and expert guidance with specific topics regarding our products. For a complete list of these Tech Tips, go to http://www.lsoft.com/resources/techtip.asp .

7.2 Mailing Lists

There are several mailing lists dedicated to the support of LISTSERV.

LSTSRV-L@PEACH.EASE.LSOFT.COM	for LISTSERV maintainers and interested list owners
LSTOWN-L@PEACH.EASE.LSOFT.COM	for LISTSERV list owners
LISTSERV-LITE@PEACH.EASE.LSOFT.COM	for LISTSERV Lite users
LISTSERV-DEVELOPERS@PEACH.EASE.LSOFT.COM	for third-party developers using features documented in the Developer's Guide to LISTSERV

To subscribe to any of these lists, send mail to LISTSERV@PEACH.EASE.LSOFT.COM with the following command in the body of the message:

```
SUBSCRIBE listname Your Name
```

7.3 Contacting L-Soft Support

To keep costs to a minimum, we have adopted the following "light weight" maintenance and support structure for LISTSERV Lite:

- Fixes will be made available from time to time on our FTP server, and can be downloaded at no charge.
- Technical assistance will be provided through a special mailing list, LISTSERV-LITE@PEACH.EASE.LSOFT.COM. LISTSERV Lite administrators will be invited to subscribe to the list and share problems and solutions. L-Soft support staff will monitor the list and answer the tougher questions as time permits.
- L-Soft will accept bug reports from LISTSERV Lite customers – even those using the Free Edition. However, L-Soft may not be able to provide individual answers. Furthermore, L-Soft does not guarantee that all problems will be solved, or that they will be solved in any particular time frame.
- The L-Soft support helpdesk will not accept calls from LISTSERV Lite customers. All support inquiries must be directed to the LISTSERV-LITE list, which is monitored by the support staff. Sometimes it may take a while for the support staff to answer these questions, because requests from LISTSERV Classic customers, who pay a yearly support fee, have a higher priority.
- New versions, when released, will be available as an optional one-time charge. Technical assistance for older versions will continue to be available for a reasonable period of time on the LISTSERV-LITE mailing list. Fixes will only be provided for current versions.

This approach strikes a balance between making sure that customers are not left out in the cold when a serious problem occurs, and keeping support costs to a reasonable level.

Starting with LISTSERV 14.4, it has been possible to purchase maintenance (including full support) for LISTSERV Lite. Please contact your sales representative for details and pricing.

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